AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A method for analyzing a power modeling simulation, comprising:
   receiving simulated power value data from a power modeling simulator, wherein the power value data comprises at least one type of power value selected from MAX, TYP, MIN, and TypMax;
   generating a set of summary data from the power value data; and
   reporting the summary data,
   wherein the summary data includes at least one type of data selected from single-cycle summary data configured to report a peak single cycle derivative power value, wherein a derivative power value is a difference between two particular associated power values in the simulation, multi-cycle summary data configured to report a peak average power value over multiple cycles, and multi-cycle derivative data configured to report a peak derivative power value over multiple cycles.

2. (Previously Presented) The method of claim 1, wherein:
   generating summary data includes generating multi-cycle summary data, comprising:
   calculating a value of a single-cycle derivative,
   wherein the single-cycle derivative is a derivative of two particular power data in a set of successive cycles.

3. (Original) The method of claim 2, wherein the single-cycle derivative is a peak single-cycle derivative.

4. (Cancelled)

5. (Currently Amended) A method of analyzing power modeling simulation for designing a chip, comprising:
   obtaining a plurality of power value data from a power modeling simulator, wherein the plurality of power values comprises at least one type of power value selected from MAX, TYP, MIN, and TypMax;
   generating a set of summary data; and
   reporting the summary data as parameters for chip design,

wherein the summary data includes at least one type of data selected from single-cycle summary data configured to report a peak single cycle derivative power value, wherein a derivative power value is a difference between two particular associated power values in the simulation, multi-cycle summary data configured to report a peak average power value over multiple cycles, and multi-cycle derivative data configured to report a peak derivative power value over multiple cycles.

6. (Previously Presented) The method of claim 5, wherein generating summary data comprises:
calculating a multiple-cycle power average, wherein the multi-cycle power average is an average of the power value data over a plurality of cycles.

7. (Original) The method of claim 6, wherein a length of the plurality of cycles is fixed.

8. (Previously Presented) The method of claim 6, wherein generating summary data further comprises:
calculating a peak value of the multi-cycle power average.

9. (Cancelled)

10. (Currently Amended) A method of data analysis for a power modeling simulation, comprising:
obtaining a plurality of power value data from a power modeling simulator, wherein the power value data comprises at least one type of power value selected from MIN, TYP, MAX, and TypMax;
generating a set of summary data from the power value data;
analyzing the summary data according to a design requirement; and
reporting a result of the analyzing step;
wherein the summary data includes at least one type of data selected from single-cycle summary data configured to report a peak single cycle derivative power value, wherein a derivative power value is a difference between two particular associated power values in the simulation, multi-cycle summary data configured to report a peak average power value over multiple cycles, and multi-cycle derivative data configured to report a peak derivative power value over multiple cycles.

11. (Original) The method of claim 10, further comprising:
calculating a value of the multi-cycle derivative.

12. (Original) The method of claim 11, further comprising:

setting a threshold value as a reference value for determining the end of a current multi-cycle derivative;

calculating a single-cycle derivative; calculating a derivative of a start value and an end value of associated power data in the current multi-cycle derivative;

calculating a ratio of the value of the single-cycle derivative over the value of a derivative of the start value and the end values of associated power data derivative when the direction of the current multi-cycle derivative changes; and

generating the value and its cycle of the multi-cycle derivative when the ratio becomes larger than the threshold value, wherein the single-cycle derivative is a derivative of two particular power data in successive cycles.

13. (Original) The method of claim 11, further comprising:

setting a threshold value that is a reference value for determining the end of a current multi-cycle derivative;

calculating a difference from a highest value to a current value of the power data in the current multi-cycle derivative;

calculating a difference from the highest value to a start value of the power data in the current multi-cycle derivative;

calculating a ratio of the difference from the highest value to the current value of the power data over the difference from the highest value to the start value of the power data in the current multi-cycle derivative when the direction of the current multi-cycle derivative changes; and

generating the end-value and its end-cycle of the current multi-cycle derivative when the ratio becomes larger than the threshold value.

14. (Previously Presented) The method of claim 1, further comprising:

applying an automatic detection scheme to detect an end for an multi-cycle derivative (MCD), if an multi-cycle derivative is included in the summary, wherein the automatic detection scheme is one selected from single-cycle derivative (SCD)/MCD, DROP/TOP, and a combination thereof.

15. (Previously Presented) The method of claim 5, further comprising:

applying an automatic detection scheme to detect an end for an multi-cycle derivative, if an multi-cycle derivative is included in the summary, wherein the automatic detection scheme is one selected from single-cycle derivative (SCD)/MCD, DROP/TOP, and a combination thereof.

16. (Previously Presented) The method of claim 10, further comprising:

applying an automatic detection scheme to detect an end for an multi-cycle derivative, if an multi-cycle derivative is included in the summary, wherein the automatic detection scheme is one selected from single-cycle derivative (SCD)/MCD, DROP/TOP, and a combination thereof.